CLAIMS

1. A logic circuit uses hardware to process keyboard scanning comprises the idea of

   utilizing the driving ability of electric resistances of column input ends higher than

   that connected to electric resistances of row output/input ends to accordingly

5 dispose the column input ends formed naturally at the higher electrical potential

   status and the row output/input ends; when the key located at the crossing point of

   the column input end and the row output/input end is pressed, the currents of the

   said column input ends and the row output/input ends conduct with each other for

   changing the high and lower electrical potential status to approach to a consistent

10 and equal electric potential; the features of the detecting method are:

   when one or a plurality of specially appointed keys are pressed, the electrical

   potentials are conducted with each other; after conduction, one of the row

   output/input ends should convert from a low electric potential status to a high

   electric potential status; when a keyboard matrix detects that any one or more than

15 one signal of the row output/input ends converts from a lower electric potential

   status to a higher electric potential status, that means a key is pressed;

   a pressed key detecting logic sequentially and alternately detects that whether

   one of the row output/input ends with elevated electric potential changes to a low

   electric potential status; since the pressed key conducts the electrical potential

20 between the said column and row to an equal state, when one or more than one of

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the column input ends converts from a high electric potential to a low electric state, the location of the pressed key can be detected through the crossing point of the said matrix;

then the pressed key detecting logic informs an external logic to store this one or a plurality of column and row numbers in a memory for storing pressed key locations;

after the external logic stores the column and row numbers in the memory for storing pressed key locations, the pressed key detecting logic waits for a period of time of unstable signals and then inputs the signals; it is required that only if the same result is obtained after two detections, then the pressed key is listed as a valid one and a report is output to the system for execution;

2. A logic circuit uses hardware to process keyboard scanning according to Claim 1, wherein another feature of the detecting method thereof is that:

no matter whether a key is pressed or not, the pressed key detecting logic can always sequentially and alternately drive one of the row output/input ends to a low electric potential status; when one of the row output/input ends is driven to a low electric potential status and the pressed key logic detects that all of the column input ends are in a high electric potential status, then the pressed key detecting logic moves to drive the next row output/input signal;

when one of the row output/input ends is driven to a low electric potential

status and the pressed key detecting logic detects any one or more than one of the column input ends is in a low electric status, it informs the external logic to store this one or a plurality of column and row number in the memory for storing pressed key locations;

5   after the external logic stores the column and row numbers in the memory for storing pressed key locations, the pressed key detecting logic waits for a period of time of unstable signals and then inputs the signals; it is required that only if the same result is obtained after two detections, then the pressed key is listed as a valid one and a report is output to the system for execution.

10   3. A logic circuit uses hardware to process keyboard scanning according to Claim 1, wherein the pressed key detecting logic can use the following two conditions to detect the existence of an uncertain key:

when more than one electric potential of the row output/input ends are in a low electric potential status (including the row output/input terminals driven by the pressed key detecting logic); additionally, when more than one electric potential

15   of the column input ends is in a low electric potential status.